TARGET : MH-CET 2015

TEST # 09 | DATE : 19 - 04 - 2015

Test Type : MAJOR | Test Pattern : MH-CET

SYLLABUS : FULL SYLLABUS

ANSWER KEY

Que.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Ans.	2	3	3	1	4	4	2	4	3	4	2	1	3	2	3	2	3	1	3	4
Que.	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Ans.	3	2	1	4	2	1	3	1	1	2	1	1	3	4	2	2	1	1	3	1
Que.	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Ans.	1	4	1	3	3	2	1	4	1	1	1	3	1	1	3	3	1	2	1	3
Que.	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
Ans.	1	4	1	1	3	1	3	3	2	3	1	2	2	2	3	3	1	4	3	3
Que.	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
Ans.	1	2	2	4	2	4	1	1	3	2	3	2	3	4	2	2	1	1	1	2
Que.	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
Ans.	3	3	1	4	3	2	2	4	3	1	1	1	3	3	2	2	2	3	3	2
Que.	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
Ans.	4	3	4	3	2	4	3	2	4	3	1	2	2	2	3	1	1	2	3	3
Que.	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160
Ans.	4	3	1	4	3	2	4	4	2	2	3	4	3	4	2	2	1	3	1	3
Que.	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
Ans.	1	2	3	4	2	1	2	3	1	2	2	3	1	1	3	3	2	1	2	3
Que.	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200
Ans.	1	3	1	4	4	3	1	3	2	3	2	3	2	3	1	4	3	3	4	1

HINT – SHEET

1. (2) $I_z = \frac{150-50}{5\times10^{-3}} - 5\times10^{-3} = 15\text{ mA}$

2. (3)

3. (3) Acceleration : $a = \frac{QE_0}{m}\sin(\omega t)$ ...(i)

Velocity : $v = \frac{QE_0}{m} - \frac{QE_0}{m\omega}\cos(\omega t)$ ...(ii)

Position : $x = \frac{QE_0}{m\omega}t - \frac{QE_0}{m\omega_2}\sin(\omega t)$ ...(iii)

4. (1)

$\frac{n\lambda D}{d} = \frac{d}{2} \Rightarrow n = \frac{d^2}{2\lambda D}$

5. (4) $F = \frac{GMm}{4R^2} - \frac{G\left(\frac{M}{4/3\pi R^3}\times\frac{4}{3}\pi\frac{R^3}{8}\right)m}{\left(\frac{5}{2}R\right)^2}$

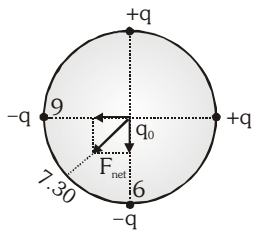
$= \frac{GMm}{4R^2} - \frac{GMm}{50R^2}$

$= \left(\frac{25-2}{100}\right)\frac{GMm}{R^2} = \frac{23}{100}\frac{GMm}{R^2}$

6. (4) $\frac{30\lambda D}{d} = (\mu-1)t\frac{D}{d}$

$\Rightarrow \mu - 1 = \frac{30\times6000\times10^{-10}}{3.6\times10^{-5}} \Rightarrow \mu = 1.5$

7. (2)



8. (4)

$E_1 = Q \times \ell_1$ ..... (1)

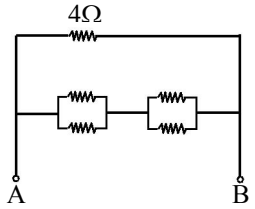
$E_2 = Q \times \ell_2$ ..... (2)

$\frac{E_1}{E_2} = \frac{\ell_1}{\ell_2} = \frac{80}{60} = \frac{4}{3}$ (ℓ_1 & ℓ_2 should be measured from A)

9. (3) The dotted lines may be surface boundary of a conductor. Electric lines of force do not enter a conductor. Potential of a conductor is constant but not necessarily zero. It may be zero also. So, Point P may be inside a conductor (solid or hollow).

10. (4) No change in flux.

11. (2)



12. (1) $d = \frac{K(Ze)}{V}$, not dependent on charge

13. (3) $\frac{dN}{dt} = \lambda N = \lambda \frac{m}{M}.N_A$

14. (2) $qVB = \frac{mv^2}{R} \Rightarrow v = \frac{qBR}{m}$

$K = \frac{1}{2}mv^2 = \frac{q^2B^2R^2}{2m} \Rightarrow K \propto R^2$

$\Rightarrow \left(\frac{R}{R'}\right)^2 = \frac{1}{3} \Rightarrow R' = \sqrt{3}\,R$

15. (3) $\frac{\left(\frac{R}{4}\right)}{15} = \frac{40}{60} \Rightarrow R = 40\ \Omega$

16. (2) $V = \frac{qBR}{m} \Rightarrow vm = qBR$

$\Rightarrow vm \propto R \Rightarrow m_A v_A > m_B v_B$

17. (3) ${}^{A}_{z}X \xrightarrow{3-\alpha} {}^{A-12}_{z-6}X \xrightarrow{2-\text{positron}} {}^{A-12}_{z-8}X$

$\frac{n}{p} = \frac{(A-12)-(Z-8)}{Z-8} = \frac{A-Z-4}{Z-8}$

18. (1) $Y = \overline{\overline{A}B} + \overline{A\overline{B}}$

$= A + \overline{B} + \overline{A} + B$

= A + B (OR gate)

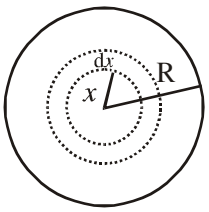
19. (3) $dM = \frac{\sigma(2\pi x\,dx)}{T}.(\pi x^2)$

$= 2\pi^2 \sigma x^3\,dx.\frac{\omega}{2\pi}$

$= \pi\,\sigma\,\omega\,x^3\,dx$

$M = \pi\sigma\omega \int_0^R x^3 dx$

$= \frac{\pi\sigma\omega R^4}{4}$



20. (4) $V(t) = -V_0 + \frac{2V_0}{T} \times t$;

$V_{rms} = \sqrt{\frac{\int_0^T V^2 dt}{\int_0^T dt}} = \sqrt{\frac{\int_0^T \left(V_0^2 + \frac{4V_0^2 t^2}{T^2} - \frac{4V_0^2 t}{T}\right) dt}{\int_0^T dt}} = \sqrt{\frac{V_0^2 T + \frac{4V_0^2 T}{3} - 2V_0^2 T}{T}} = \frac{V_0}{\sqrt{3}}$

21. (3) When switch is open

$I = \frac{E}{3} \Rightarrow E = 0.2 \times 3 = 0.6$ Volt

When switch is closed

$R_{net} = \frac{6\times 3}{6+3} = 2\Omega.$

therefore, $I' = \frac{0.6}{2} = 0.3$ A

22. (2) $\frac{Fe}{Fg} = \frac{kq^2}{Gm^2} = \frac{9\times10^9 \times 1.6\times1.6\times10^{-38}}{6.67\times10^{-11}\times9.1\times9.1\times10^{-62}}$

$\therefore \frac{Fe}{Fg} \approx 10^{42}$

23. (1) Since $V_A = \frac{Kq}{a}$ and $V_B = \frac{Kq}{a}$

$\therefore$ Work done $W = q\,(V_B - V_A) = 0.$

24. (4)

25. (2) $\frac{v^2}{r} = k^2 r t^2 \quad v = krt$

$F_t = m\frac{dV}{dt} = m\,k\,r$

$P = F_t.V = m\,k^2\,r^2\,t$

26. (1)

27. (3) $\Delta\phi = M(\Delta I) = 1.5\ (20) = 30$ Wb.

28. (1) $Fe = \frac{e^2}{4\pi \in_0 r^2}$,

$$F_m = \frac{\mu_0}{4\pi}\left(\frac{e^2v^2}{r^2}\right) \Rightarrow \frac{F_e}{F_m} = \frac{1}{\mu_0 \in_0 v^2} = \frac{c^2}{v^2}$$

29. (1)

30. (2)

31. (1)

32. (1) $e = \frac{1}{2}\ B\omega l^2$

33. (3)

34. (4) ϕ = constant $\Rightarrow$ induced current = 0

35. (2) Use $\vec{F} = I(\vec{\ell} \times \vec{B})$

36. (2) $$-\frac{GM_1m}{r/2} - \frac{GM_2m}{r/2} + \frac{1}{2}mv^2 = 0$$

$$\Rightarrow v = 2\sqrt{\frac{G(M_1 + M_2)}{r}}$$

37. (1) In YDSE $\beta = \frac{\lambda D}{d} \Rightarrow \frac{\lambda}{d} = 6 \times 10^{-3}$

In single slit Franhafer diffraction experiment At first minimum diffraction

$$\theta \approx \frac{\lambda}{b} = \frac{\lambda}{d} = 6 \times 10^{-3} \text{ radian}$$

38. (1)

39. (3) $MV = (M + m)\ v'$

$$\Rightarrow v' = \frac{Mv}{M+m}$$

$$\frac{1}{2}(M+m)\left(\frac{MV}{M+m}\right)^2 = \frac{1}{2}KA^2$$

$$\Rightarrow A'^2 = \frac{(MV)^2}{k(M+m)}$$

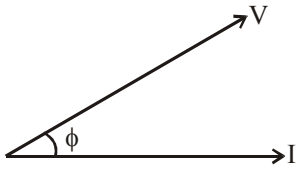
$$\Rightarrow A' = A\sqrt{\frac{M}{M+m}} \qquad \left(\because \frac{1}{2}KA^2 = \frac{1}{2}MV^2\right)$$

40. (1)

41. (1)

42. (4)

43. (1)



$$\tan\phi = \frac{X_L - X_C}{R} = \frac{5-8}{4} = -\frac{3}{4}$$

Therefore the current leads the voltage by $\tan^{-1}$ (3/4)

44. (3) $\frac{Y_{cu}}{Y_{steel}} = \frac{l_{steel}}{l_{cu}}$

$l_{steel} + l_{cu} = x$

$$\left(\frac{Y_{cu}}{Y_{steel}} + 1\right) l_{cu} = x$$

$$\Rightarrow l_{cu} = \frac{x}{\left(\frac{Y_{cu}}{Y_{steel}} + 1\right)}$$

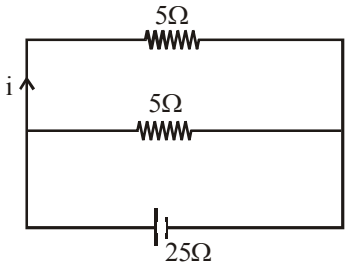
45. (3) $U_i = nT\ 4\pi\ r^2$

$R = r\ n^{1/3}$

$U_f = T\ 4\pi\ (rn^{1/3})^2 = T4\ \pi\ r^2\ n^{2/3}$

fractional loss in energy $= \frac{U_i - U_f}{U_i} = 1 - \left(\frac{1}{n}\right)^{1/3}$

46. (2) Given circuit can be reduced to



Therefore $i = \frac{25V}{5\Omega} = 5A$

47. (1) $R = \frac{mv}{qB}$

$$\Rightarrow v = \frac{qBR}{m} = \frac{1.6\times10^{-19}\times1\times0.2}{1.67\times10^{-27}} = 0.2\times10^8 \text{ m/s}$$

48. (4) $n = \frac{V}{2L} \Rightarrow L = \frac{V}{2n}$

$L = L_1 + L_2 + L_3$

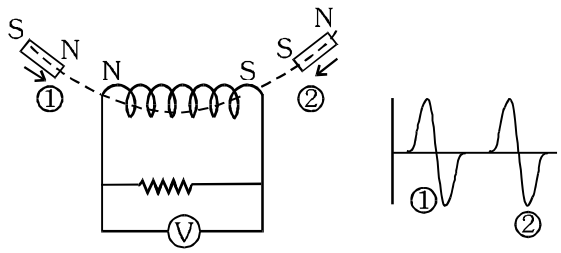
$\Rightarrow \frac{V}{2n} = \frac{V}{2n_1} + \frac{V}{2n_2} + \frac{V}{2n_3}$

$\Rightarrow \frac{1}{n} = \frac{1}{n_1} + \frac{1}{n_2} + \frac{1}{n_3}$

49. (1) $T = \frac{2\pi m}{qB} = \frac{2\pi(1.6\times10^{-27})}{(1.6\times10^{-19})(1)} = 2\pi\times10^{-8}$ s

$= 20\pi$ ns

50. (1)



51.

	A(g) ⟶	2B(g) +	C(s)
t = 0	400	0	0
t = t	(400-p')	2p'	0

Since the reaction is of first order

$k = \frac{2.303}{t}\log\frac{400}{(400-p')}$

$\frac{0.6932}{24} = \frac{2.303}{48}\log\frac{400}{(400-p')}$

On solving p' = 300

After 48 min. the pressure of the reaction vessel is (400+p') = 700 mm Hg.

52. $C(s) + O_2(g) \longrightarrow CO_2(g) + 94.2$ kcal ...(1)

$H_2(g) + 1/2O_2(g) \longrightarrow H_2O(l) + 68.3$ kcal. ...(2)

$CH_4(s) + 2O_2(g) \longrightarrow CO_2(g) + 2H_2O(l) + 210.8$ kcal ...(3)

The required equation is

$C(g) + 2H_2(g) \longrightarrow CH_4(g)$

so, $\Delta H_f = \Delta H_1 + (2 \times \Delta H_2) - \Delta H_3 = -20$ kcal mol^{-1}

53. $\frac{a_{KCl}}{a_{NaCl}} = \frac{r_{K^+} + r_{Cl^-}}{r_{Na^+} + r_{Cl^-}} = \frac{\frac{1}{0.9} + \frac{1}{0.6}}{1 + \frac{1}{0.6}} = \frac{0.6+0.9}{1.6\times0.9} = 1.04$

54. $E_{Cu|Cu^{+2}} = E^0_{Cu|Cu^{+2}} - \frac{0.059}{2}\log[Cu^{+2}]$ ...(i)

$E'_{Cu|Cu^{+2}} = E^0_{Cu|Cu^{+2}} - \frac{0.059}{2}\log\frac{[Cu^{+2}]}{100}$ ...(ii)

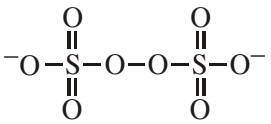
(i) - (ii) $\Rightarrow E'_{Cu|Cu^{+2}} - E^0_{Cu|Cu^{+2}} =$

$\frac{0.059}{2}\left[\log[Cu^{+2}] - \log 100\right]$

$\Rightarrow \Delta E_{Cu|Cu^{2+}} = \frac{0.059}{2}\log 10^{-2} = 0.059;$

$\Delta E_{Cu|Cu^{2+}} = 0.059$ V

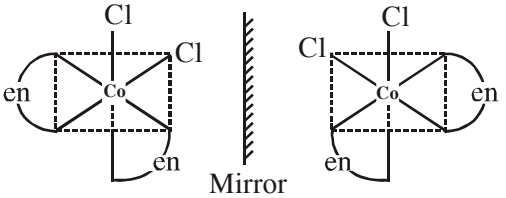
55.



56. $2Cu_2S + 3O_2 \longrightarrow 2Cu_2O + 2SO_2$

$3Cu_2O + CH_4 \longrightarrow 6\,Cu + 2H_2O + CO$

57. Compound '1' does not have any element of symmetry and thus exhibit optical isomerism.



58. In ZnS, S^{-2} ions form the fcc lattice and Zn^{+2} ions are present is alternate tetrahedral voids.

60. $N = N_0e^{-\lambda t}$; $100 = 200\ e^{-t}$; $t = \ell n\ (2)$ sec.

61. $NH_3 + 3NaOH + 2K_2HgI_4 \longrightarrow H_2N\text{-}Hg\text{-}O\text{-}HgI + 4KI + 2H_2O + 3NaI$

62. CN^- is strongest field ligand and stability is directly prop. to field strength of ligand.

63. Blue colour is due to the formation of CrO_5.

$Na_2Cr_2O_7 + 4Na_2O_2 + 5H_2SO_4 \longrightarrow 2CrO_5 + 5Na_2SO_4 + 5H_2O$

65. no. of hcp unit cell = $\frac{6\times10^{24}}{6} = 10^{24}$

no. of THV = 2×10^{24}

66. In $[Co(H_2O)_6]^{+2}$, Co^{+2} has 3 unpaired electrons. $[Co(H_2O)_6]^{+2}$ reacts with molecular oxygen in the presence of excess liquor NH_3 give a $[Co(NH_3)_6]^{+3}$

Co^{+3} has 'Zero' unpaired electrons.

[$\because$ NH_3 is a strong ligand]

69. $SnO_2 + 2C \longrightarrow 2\,CO + Sn$

The ore cassiterite contains the impurity & Fe, Mn, W and traces of Cu.

70. For first order reaction,

$[A] = [A]_0\, e^{-kt}$

Hence concentration of NO_2 decreases exponentially.

Also $t_{1/2} = \dfrac{0.693}{k}$, which is independent of concentration and $t_{1/2}$ decreases with increase of temperature $t_{99.6} = 8t_{1/2}$.

71. $k = Ae^{-Ea/RT}$

As T $\uparrow$es , k $\uparrow$es exponentially.

73. Energy released at constant volume due to combustion of 3.5g of a gas = 2.5 × 0.45

Hence energy released due to the combustion of 28g (i.e. mole) of a gas = $2.5 \times 0.45 \times \dfrac{28}{3.5}$

$= 9\ kJ\ mol^{-1}$

75. Due to layered structure in black phosphorus, it is most stable.

76. Workdone against constant external pressure = $P_{ext}\,(V_2-V_1)$.

In adiabatic condition q = 0 therefore w = ΔU

$\therefore\ P_{ext}\,(V_2-V_1) = \dfrac{3R}{2}(T_2-T_1)$

[$\because$ Expansion work is negative]

on solving $T_2 = T_1 - \dfrac{2}{3\times 0.0821}$

77. $\Delta T_f = T_0 - T_S = i\,k_f\,m$

O - T_S = 1.2 x 1.86 x 0.2

- T_S = 0.446

$\Rightarrow T_S = -0.45\ ^0C$

$\left[\begin{array}{l}\because i = 1+(n-1)\propto \\ i = 1+(2-1)0.2 \\ i = 1.2\end{array}\right]$

78. amount adsorbed

$= (0.060 - 0.042) \times 50 \times 10^{-3} \times 60$

$= 0.018 \times 50 \times 60 \times 10^{-3} = 0.018 \times 3$

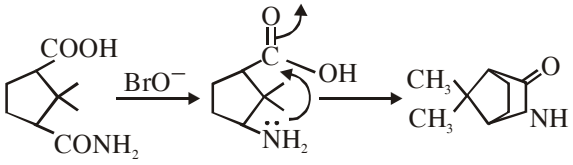
= 0.054 g = 54 mg

Amount adsorbed per gram of activated charcoal = $\dfrac{54}{3}$ = 18 mg

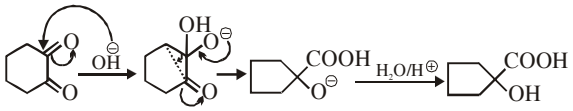
84. The first step involves the formation of allyl carbocation which is stabilished by resonance.

85. Aryl halides containing electron releasing groups like -OCH_3 form benzyne as intermediate when treated witrh KNH_2 in liquid NH_3.

86.



87.



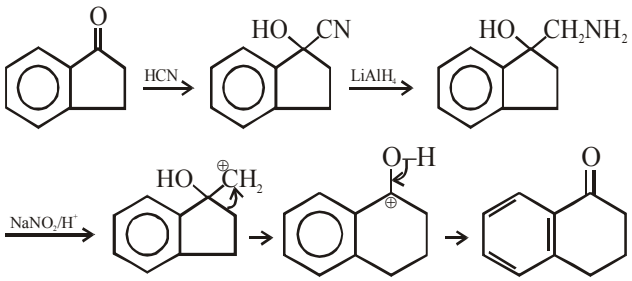
88. $nCH_2 = CH - CH = CH_2 + n\,C_6H_5 = CH_2$ (styrene)

(1,3-butadiene)

$\longrightarrow -[CH_2 - CH = CH - CH_2 - CH(C_6H_5) - CH_2]_n-$

(Buna-S)

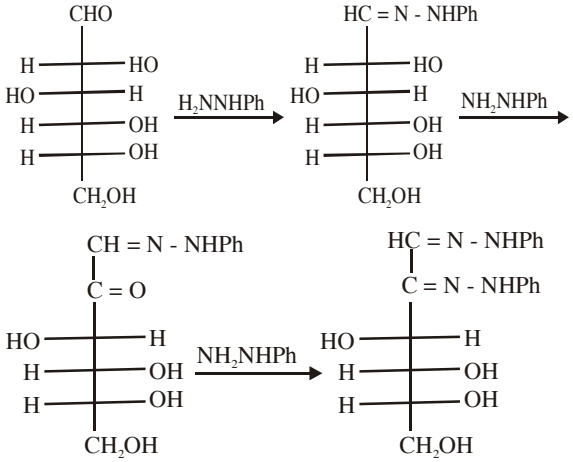
89.



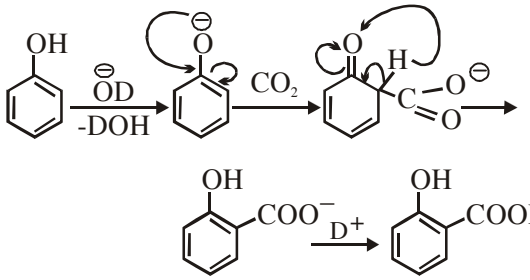
90. Due to intramolecular hydrogen bonding between carbonyl group and -OH groups, and also due to stability factor of carbocations.

91. Because - CH_2 - hydrogen is more acidic than -CH_3 hydrogen

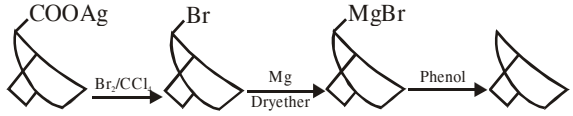
92.



93.



94.

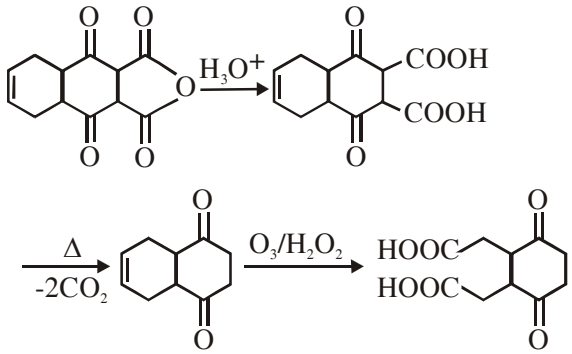


95. O_2N—⟨O⟩ acts as a base and it abstracts H^+ from phenol to give $PhO^{\ominus}$. $PhO^{\ominus}$ is a stronger nucleophile than O_2N—⟨$O^{\ominus}$⟩.

96. Lesser steric hindrance, more easily the ester formed.

98. Polymers whose repeating structural units are derived from two (or) more types of monomer units are called copolymers.

100.



101. The two alternative forms of a gene are called alleles and they occupy identical loci on homologous chromosome.

102. As per law of segregation, gametes receive only one of the two factors and are pure for a given trait.

105. E.*coli* is a prokaryote, having one origin and shows θ replication.

106. According to beads-on-string theory, nucleosome fibre is coiled to make solenoid fibre which is of 300 Å in diameter.

107. Each triplet codon on m-RNA codes for specific amino acid. This is called m-RNA language or genetic code or cryptogram.

109. Valine is coded by four codes as GUU, GUC, GUA, GUG.

110. a - s, b - r, c - q, d - p

111. In E.*coli*, 260 genes are grouped in 75 different operons.

112. Isolation → Fragmentation → Screening → Insertion → Introducing recombinant vector → Cultivating cells → Transformation

113. EcoR I is the restriction endonuclease which is isolated from *Escherichia* (E) *coli* (co) strain RY 13 (R) and is the first endonuclease (I) to be discovered.

114. Taq polymerase adds dNTPs behind the primer on ss DNA.

116. DNA transposons do not involve RNA intermediate and enzyme transposase makes a staggered cut at target site producing sticky ends.

117. Himgiri is Hill bunt, leaf and stripe rust resistant variety of wheat.

119. a - t, b - s, c - p, d - q

120. SCP is the microbial biomass produced by uni and multicellular organisms.

121. Ruben & Kamen confirmed and directly proved that the source of oxygen evolved during photosynthesi is water. They had used heavy isotope of oxygen, $^{18}O_2$.

122. Light energy shows dual nature as during propagation, it behaves as wave form (Wave theory) where as on interaction with matter behaves as a stream of discrete packetes of energy known as photons (Corpuscular theory).

123. In PS II, manganese, calcium and chloride ions are present in addition to the electron carriers.

124. *Kalanchoe* is a CAM plant while jowar is a C_4 plant. In C_4 pathway, CO_2 fixation occurs twice during day.

125. 1 ATP is used during the conversion of fructose-6-phosphate to fructose-1,6-diphosphate.

126. Glucose (6C) molecule undergoes phosphorylation with the help ATP to form glucose-6-phosphate.

127. 2PGA undergoes dehydration and phosphoenol pyruvic acid or PEPA (3C) is formed in presence of the enzyme enolase and Mg^{++} as co-factor.

128. The conversion of 2 Succinyl Co A to Succinate involves 2 ATPs and this reaction is known as substrate level phosphorylation.

129. $CH_3COCOOH \xrightarrow[TPP+Zn^{++}]{Pyruvate\ Decarboxylase} CH_3CHO + CO_2$

This reaction is known as decarboxylation.

130. In *Begonia*, the foliar buds are produced on the leaf surface.

131. Intine is the inner layer of sporoderm, containing cellulose and pectin. It encloses protoplasm with single haploid nucleus.

132. In angiosperms, embryo sac is monosporic, endosporic, 7 celled, 8 nucleated polygonum type.

133. In autogamy chances of new character combination are less.

134. In Gymnosperms, haploid (n), multicellular, female gametophyte nourishes the developing embryo and is called endosperm.

135. The most common type of endosperm is nuclear endosperm and wall formation occurs in a centripetal manner around the nuclei, to form a cellular mass.

136. *Callistemon* is an ornithophily plant.

137. Apomictic seeds are shown in *Helianthus annus* which belongs to Asteraceae family.

138. *Kalanchoe* shows leaf modification for vegetative propagation.

139. Catabolism is carried by fungal and bacteria enzymes.

140. N_2 gas forms 6% of total green house gases.

142. Satellite is the short, spherical parts of chromosome beyond nucleolar organizer.

143. Haemophilia is a recessive sex linked disorder.

144. a - r, b - s, c - p, d - q

145. Inability to synthesise haemoglobin is the symptom for thalassemia.

146. DNA is used to treat cystic fibrosis.

149. F. Banting and Charles Best extracted insulin from islet cells.

150. Application of charge and DNA fragment movement → Embedding of DNA strands into nylon membrane → Sample DNA and probe DNA form double stranded structure

151. *Phytophthora palmivora* is fungicidal while *Ribosema locustae* is a corn borers.

152. a - q & r

153. Masses of bacteria, associated with fungal filament.

154. Protobiogensis occured about 3 billion years ago in primordial earth.

155. B - core of earth
C - Atmosphere
D - reducing type and there was maximum hydrogen

156. Earth surface was cooled down then the CH, CH_2 highly reactive free radicals formed and condensed to form a variety of both saturated and unsaturated hydrocarbons.

157. a - r, b - s, c - p, d - q

158. A. Old world monkey
B. New world monkey
D. Tarsier
E. Ape

159. A - I - 18th days to several weeks.
B - II - 10 to 14 days, III - 1 to 2 years
C - IV - Ascaricides

160. a - r, b - q, c - s, d - p

161. The causative HIV retrovirus enters helper T-lymphocytes thus reducing their number

162. Hashish has effects on cardiovascular system of body.

163. Morphine is often given to person who have undergone surgery as a pain killer.

164. Usually reduces fertilisation and even productivity is an odd statement because it is a demerit of inbreeding and other statements are merits of inbreeding.

165. Leghorn is the best layer while playmouth and aseel are preferred broilers.

166. In English breeds of poultry is Australoop only.

167. Aseel is an Indian breed of poultry.

168. Derived from mesoderm.

169. A - q, z, b B - r, x, a C - p, y, c

170. Opening of SVC, IVC and coronary sinus provide deoxygenated blood to right atrium.

171. C.O. = 5600 ml per minute and heart rate of 80 beat

$$\therefore \text{ Stroke volume} = \frac{\text{C.O.}}{\text{heart beat}} \frac{5600\,\text{mL}}{80\ \text{beat}} = 70\,\text{mL}$$

172. Polymorphonuclear leukocytes and monocytes are cellular barriers.

173. a - t - x, b - q - w, c - r - y, d - p - z

174. A - 6 to 20
B - Renal papillae
C - 7 to 8 collecting ducts
D - duct of Bellin

175. Amino acid and uric acid respectively.

176. Iodine containing compound iodopyracet secreted out into the urine.

177. less than 400 ml/hour
less than 0.5ml/kg/h
less than 1ml/kg/h

178. a. Even if a kidney trnasplant is proper the recipient may need to take immunosuppressants for a long time
b. The cell-mediated immune response is responsible for the graft rejection

179. C - Association visual area for perception, analysis and storing information obtained by sight.
B - Wernicke's area called sensory speech area.

180. Sympathetic nervous system and nor - adrenaline.

181. A - Ependyma is internal lining of central canal.
B - Site for ascending tract and conduct sensory impulse to the brain.
C - Site for descending tract and carry motor impulse to spinal cord.

182. a. Only vitreous humor maintain the shape of the eyeball.
b. The greatest visual activity have whole retinal wall.

183. I - Conjugated protein
II - Retinal (Vitamin A derivative)
III & IV - Opsin.

184. (only E) Hair cells are ciliated columnar epithelial cells present in rows.

185. Neurohypophysis contains axons in between pituicytes and axonix fibers end in knobs called herrings bodies. Hormones of neurohypophysis release by the supra optic nucleus.

186. (only c) High level of progesterone and testosterone in blood gives negative feedback signal to pituitary so LH and ICSH secretion is stopped respectively.

187. a - r, b - s, c - p, d - t, e - q

188. Gastrin $\rightarrow$ stimulates gastric gland for the secretion of HCl and pepsinogen.
GIP $\rightarrow$ inhibit gastric secretion and motility
Thymus gland is located behind the sternum.

189. In agamogeny variation may be rarely be seen due to mutation.

190. A - Homologus to womb.
B - Homologus to Bartholin's gland.
C - A short fibro muscular band called Gubernaculum.

191. A - 2 million
B - primary oocytes
C - 1 million primordial follicle
F - endoderm of yolk sac

192. The follicle grows, it forms a clean glycoprotein layer called the zona pellucida between primary oocytes and granulose cells.

193. A primary follicle to develop into secondary follicle.

194. B - ciliated columnar epithelium
C - mesosalpinx

195. Ovaries suddenly become more responsive to the FSH and LH

196. a. During menstrual flow about 35 to 45 ml of blood is lost.
d. If the fertilization takes place, the fertilized egg passes through fallopian tube and reaches the uterus on third day after ovulation.

197. Corpus luteum becomes inactive before the formation of placent about three months of pregnancy.

199. Proteins aggregated in the form of spherical colloidal droplets were called microspheres. Coacervates and the microsphere were the forerunners of the first form of life on this earth.

200. A - Amount of progesterone decrease while FSH increase
B - Proliferative phase
C - 13th days
D - 15th days
E - Progesterone level increase